KUZNETSOV, N.T.

AUTHOR: Kuznetsov, N.T. 26-12-7/49

TITLE: In the Turgay Valley (V Turgayskoy lozhbine)

PERIODICAL: Priroda, 1957, No 12, pp 38-39 (USSR)

ABSTRACT: The Turgay valley in western Kazakhstan is several hundred km long and known for its numerous lakes which are populated by myriads of water fowl during the summer. Birds like flamingos, herons, whooper-swans, many varieties of geese, ducks and sea gulls build their nests in the reeds. For many years these birds have been living there undisturbed. The author points out that poaching has lately increased to such an extent that the rare bird species will be soon exterminated, unless the population - mainly settlers - is duly informed on the irreparable damage caused by these poachers. Another problem to overcome is the gradual sinking of the lakes' water level because of the cultivation of vast areas of virgin soil and the construction of numerous water reservoirs for the workers and for agricultural purposes. Extensive meliorative measures are recommended to prevent silting or complete drying up of the lakes. This would not only lead to a further decrease of water fowl but also destroy the fishing trade which, instead, could be considerably improved by appropriate measures.

Card 1/2

In the Turgay Valley 26-12-7/49

There are 2 photos.

ASSOCIATION: Institute of Geography of the AN, USSR (Moskva) (Institut geografii Akademii nauk SSSR (Moskva)

AVAILABLE: Library of Congress

Card 2/2

KUZNETSOV, N. T.

KUZNETSOV, N.T.

Lakes of North Kazakhstan. Priroda 46 no.5:85-86 My '57.
(MLRA 10:6)

1. Institut geografii Akademii nauk SSSR (Moskva).
(Kazakhstan--Lakes)

KUZNETSOV, N.T.; MURZAYEV, E.M., doktor geograf.nauk, otv.red.;
VOLINSKAYA, V.S., red.izd-va; KASHINA, P.S., tekhn.red.

[Hydrography of rivers of the Mongolian People's Republic]
Gidrografiia rek Mongol'skoi Narodnoi Respubliki. Moskva,
Izd-vo Akad.nauk SSSR, 1959. 152 p. (MIRA 12:9)
(Mongolia--Rivers)

AUTHOR: Kuznetsov, N.T. SOV/10-59-1-25/32

TITLE: The Distribution of Surface Run-Off in China (Raspredeleniye poverkhnostnogo stoka po territorii Kitaya)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya geograficheskaya, 1959, Nr 1, pp 150-152 (USSR)

ABSTRACT: This is a short review of an article by Kuo **Ching-hui** . "Physico-Geographical Factors of Formation of Surface Run-Off in China" published in the geographic journal **"Ti-li Hsüch-pao"**, , volume 24, Nr 2, May 1958.

Card 1/1

3(5) SOV/10-59-2-8/29

AUTHOR: Kuznetsov, N.T., Hu Tsung-p'ei

TITLE: The Hydrological Conditions of the South-Western Part of Dzungaria.

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geograficheskaya, 1959, Nr 2, pp 73-76 (USSR)

ABSTRACT: The territory of the south-western part of Dzungaria comprises the south-western extremity of the Dzungarian depression with its bordering mountain ranges: Semistay, Urkashar, Eastern Tarbagatay, Dshair, Kayli-Tau and Barlyk in the north, Dzungarian Alatau and Beshintau in the west and the Dzungarian slope of the Tyan'-Shan'in the south. The author sets forth the various hydrological conditions of the territory such as river systems, rainfall, evaporation, water absorption by the ground, water discharge, subsoil water and melted snow. As to the genesis of the water discharge of the rivers, the instability of the snow cover is

Card 1/3

The Hydrological Conditions of the South-Western Part of Dzungaria.

of foremost importance. Snow melting usually begins by the end of March or in the first days of April. Among the factors determining the quantity of melted snow descending into the rivers, is the distribution speed of the average daily air temperature above 0° C in the mountains. According to a rough estimate, this speed may be 500-550 m during a ten-day period. During April and May, snow melting comprises nearly all the snow in the bordering mountain ranges, where (with the exception of Tyan'Shan') only a few fragmentary traces of snow can be observed at the beginning of summer. The investigations have shown that the south-western part of Dzungaria offers hydrological reserves, which can be utilized for irrigational and industrial purposes. There is 1 table and 1 Soviet reference.

The Hydrological Conditions of the South-Western Part of Dzungaria.

ASSOCIATION: Sin'tszyanskaya kompleksnaya ekspeditsiya Akademii nauk KNR (Sinkiang Joint Expedition of the AS Chinese People's Republic) Institut Geografii AN SSSR (Institute of Geography of the AS USSR)

KUZNETSOV, N.T.

Our rivers in July. Priroda 49 no.7:125-126 Jl '60.
(MIRA 13:7)

1. Institut geografii AN SSSR, Moskva.
(Rivers)

KUZNETSOV, Nikolay Timofeyevich; IORDANSKIY, A.D., red. izd-va;
POLENOVA, T.P., tekhn. red.

[Treasures of our rivers] Sokrovishcha nashikh rek. Moskva,
Izd-vo Akad.nauk SSSR, 1961. 156 p. (MIRA 15:1)
(Water resources development)

KUZNETSOV, N.T.

Our rivers in June. Priroda 50 no.6:124 Je '61. (MIRA 14:5)

1. Institut geografii AN SSSR, Moskva.
(Rivers)

KUZNETSOV, N.T.

Floods at the end of summer. Priroda 50 no.8:125-126 Ag '61. (MIRA 14:7)

1. Institut geografii AN SSSR (Moskva).
(Siberia, Eastern--Floods)

KUZNETSOV, N.T.

Ancient lakes in Central Asia. Priroda 51 no.1:108-110 Ja '62.
(MIRA 15:1)

1. Institut geografii AN SSSR, Moskva.
(Asia, Central--Lakes)

KUZNETSOV, N.T.

New life of the Khangai Mountains and the Gobi; development of the natural resources of people's Mongolia. Priroda 51 no.7:74-79 Jl '62. (MIRA 15:9)

1. Institut geografii AN SSSR, Moskva.
(Mongolia--Natural resources)

KUZNETSOV, N.T.

River discharge on the territory of the Mongolian People's Republic. Izv. AN SSSR. Ser. geog. no.5:111-118 S-O '62. (MIRA 15:10)

1. Institut geografii AN SSSR.
(Mongolia—Runoff)

KUZNETSOV, N.T.

Chemism of Central Asian river waters. Izv. AN SSSR. Ser. geog. no.4:3-13 Jl-Ag '63. (MIRA 16:8)

1. Institut geografii AN SSSR.
(Asia, Central--Rivers) (Water--Composition)

KUZNETSOV, N.T.; SHELYAKINA, O.A.

Chemical and physical properties of suspended sediments in rivers of the southern Khangay. Pochvovedenie no.7:94-98 Jl '63. (MIRA 16:8)

1. Institut geografii AN SSSR i Pochvennyy institut imeni V.V. Dokuchayeva.
(Khangay Mountains—Water—Composition)
(Khangay Mountains—Sedimentation and deposition)

KUZNETSOV, N.T.; MURZAYEV, E.M.

Stages in the Quaternary development of the lakes of Central Asia. Trudy Lab.ozeroved. 15:157-173 '63. (MIRA 16:3)
(Asia, Central--Lakes)

KUZNETSOV, N.T.

Problems in the hydrology of Central Asia. Izv. AN SSSR. Ser. geog. no.1:5-13 Ja-F '64. (MIRA 17:3)

1. Institut geografii AN SSSR.

KUZNETSOV, N.T.

Learming about the geochemistry of geographical zones by the physical and chemical properties of suspended silt. Izv. AN SSSR. Ser. geog. no.5:65-70 S-O '64.

(MIRA 17:11)

1. Institut geografii AN SSSR.

KUZNETSOV, Nikolay Timofeyevich; SHUSTOVA, I.B., red.; YASNOPOL'SKIY, N.F., red.

[Along the trails of wandering rivers; a hydrologist's notes] Po sledam bluzhdaiushchikh rek; zametki gidrologa. Moskva, Izd-vo "Znanie," 1965. 78 p. (Narodnyi universitet: Estestvenno-nauchnyi fakul'tet, no.8) (MIRA 18:8)

KUZNETSOV, N.T.; SHELYAKINA, O.A.; KLYUKANOVA, I.A.

Physicochemical characteristics of suspended sediments in the Amu Darya Delta. Pochvovedenie no.5:50-57 My '65.

(MIRA 18:5)

1. Institut geografii AN SSSR i Pochvennyy institut imeni Dokuchayeva, Moskva.

KUZNETSOV, N.T.

Some problems for discussion in the paleohydrography of Central Asia during the Quaternary period. Izv. AN SSSR. Ser. geog. no. 1:75-82 Ja-F '66 (MIRA 19:2)

1. Institut geografii AN SSSR.

SOL...IN, A.O. (s.Vsevolodo-Blagodatskoye, Sverdlovskaya obl.); GRIGOR'YEV, G.V.; FREYDZON, A.I.; KUZNETSOV, N.T.; POLOV, A. (Barnaul); RZHEVSKIY, B.M. (Moskva); DAVYDOV, V.D.

Calendar of nature. Priroda 51 no.3:125-128 Mr '62. (MIRA 15:3)

1. Karagandinskiy botanicheskiy sad AN Kazakhskoy SSR (for Grigor'yev). 2. Severo-Zapadnoye upravleniye gidrometsluzhby, Leningrad (for Freydzon). 3. Institut geografii AN SSSR, Moskva (for Kuznetsov). 4. Gosudarstvennyy astronomicheskiy institut im. P.K.Shternberga, Moskva (for Davydov).
(Nature study)

KUZNETSOV, N.V.

Seminar for designers of the State Institute for the Designing and Planning of Motor Vehicle Repair and Motor Transportation Establishments. Avt.dor. 23 no.2:32 F '60. (MIRA 13:5)

(Bridges--Design)

KUZNETSOV, N.V.

KUZNETSOV, N.K., sanitarnyy vrach; KUZNETSOV, N.V., assistent

Discussion of the draft for a Sanitation Code of the U.S.S.R. Gig. i san. 22 no.5:61-62 My '57. (MIRA 10:10)

1. Iz sanitarno-epidemiologicheskoy stantsii i kafedry gigiyeny Stalinbadskogo meditsinskogo instituta.
(LEGISLATION, MEDICAL,
Sanit. Codex of USSR (Rus))

KUZNETSOV, N.V., inzh.

Synthesis of double-path hydraulic transmissions. Trudy MIIT no.118:16-32 '58. (MIRA 12:2)
(Oil hydraulic machinery)

KUZNETSOV, N.V

25(1) PHASE I BOOK EXPLOITATION SOV/1752

Plotnikov, Ivan Mikhaylovich, Valer'yan Nikitich Razumov, Valentina Ivanovna Oborina, Murshida Salimovna Razumova, Nikolay Vladimirovich Kuznetsov, and Aleksey Nikiforovich Koryakov

Potochnoye izgotovleniye obolochkovykh form (Assembly Line Manufacture of Shell Molds) Moscow, Mashgiz, 1957. 42 p. (Series: Obmen tekhnicheskim opytom) 4,000 copies printed.

Reviewer: L.M. Volpyanskiy, Engineer; Tech. Ed.: G.A. Sarafannikova; Executive Ed. (Ural-Siberian Division, Mashgiz): M.A. Bezukladnikov, Engineer.

PURPOSE: This book is intended for engineering workers in foundry shops and design establishments concerned with the development of industrial molding methods.

COVERAGE: This book reports on experience gained by the mixed crews of the Uralkhimmashzavod (Ural Chemical Machinery Plant) and the Sverdlovsk branch of the NIIKhIMMASh (Scientific

Card 1/3

Assembly Line Manufacture of Shell Molds SOV/1752

Research Institute of Chemical Machinery) in organizing mechanized mass production of large shell molds from blends containing water glass. It deals specifically with production of molds for casting large filter press frames and plates (62 to 215 kg, and 1350 x 900 mm. and 1720 x 1080 mm.). The author also describes construction of equipment used in the above process. No personalities are mentioned. There are 14 Soviet references.

TABLE OF CONTENTS:

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AVAILABLE: Library of Congress

GO/jmr
6-22-59

Card 3/3

PLOTNIKOV, I.M., inzh.; RAZUMOV, V.N., kand.tekhn.nauk; OBORINA, V.I., inzh.; RAZUMOVA, M.S., inzh.; KORYAKOV, A.N., inzh.; KUZNETSOV, N.V., inzh.

Making shell molds for frames and plates of filter presses.
Mashinostroitel' no.10:17-19 O '57. (MIRA 10:11)
(Shell molding (Founding)) (Filter presses)

PERTSELITSA, I.I.; KUZNETSOV, N.V.

Efficient method for making dies for casting plastic parts.
Mashinostroitel' no.6:35 Je '63. (MIRA 16:7)

(Plastics—Molding)

PEREPELITSA, I. I.; KUZNETSOV, N. V.

Highly-efficient method of preparing dies for plastic molding.
Ratsionalizatsiia 13 no. 10:20 '63.

KUZNETSOV, N.V.

Generalization of a theorem of V.A. Ambartsumian. Dokl. AN SSSR 146 no.6:1259-1262 O '62. (MIRA 15:10)

1. Moskovskiy fiziko-tekhnicheskiy institut. Predstavleno akademikom I.G. Petrovskim.
(Differential equations)

KABANOV, P.I., doktor ist. nauk; YERMAN, P.K., kand. ist. nauk; KUZNETSOV, N.V., kand. ist. nauk; USHAKOV, A.V., kand. ist. nauk; ANTONOV, V., red.; ZAKHAROVA, G., mlad. red.; NOGINA, N., tekhn.red.

[Outline of the history of the Russian proletariat, 1861-1917] Ocherki istorii Rossiiskogo proletariata; 1861-1917. [By] P.I.Kabanov i dr. Moskva, Sotsekgiz, 1963. 388 p. (MIRA 16:11)
(Labor and laboring classes)

USSR/Engineering Nov 1946
Heat - Transmission
Thermodynamics

PA 38T26

"Heat Transmission and Thermal Computation of Steam Generating Units," N. V. Kuznetsov, V. N. Timofeyev, Candidates in Technical Sciences, Boiler Laboratory, 7½ pp

"Izvest VTI" No 11 (137)

Discusses convective thermal transmission during frontal and side washing with gas of the heating tube surfaces, convective thermal transmission during prolonged washing of the heating surface, thermal transmission due to the illumination of gases, and the effect created by soiling the heating surfaces. Mentions the various institutions and administrations which have contributed to the solution of this problem.

38T26

KUZNETSOV, N. V.

15

38T26

KUSNETZOV, N. V.

FA 14T49

USSR/Boilers
Surfaces - Heating

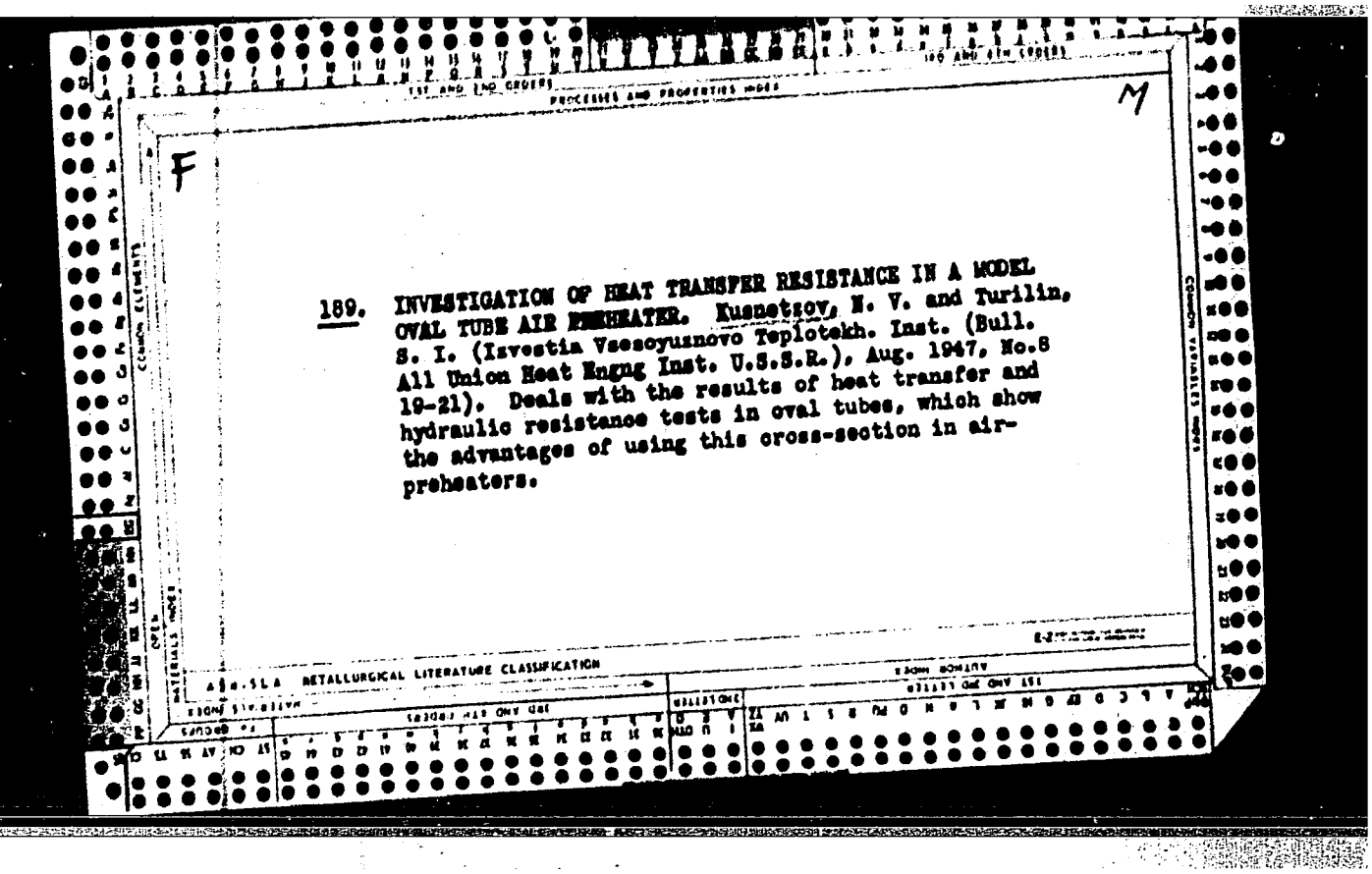
May 1947

"Investigation of New Types of Heating Surface for Air Preheaters," N. V. Kusnetzov, S. I. Turilin, 9 pp

"Izv VTI" No 5

Considers the choice of a small-bodied air heater for high pressure boilers. Shows the advantage of using narrow bundles of small diameter tubes and of corrugated sheets. Experimental data are given on the heat emission and resistance of bundles of corrugated sheets. Fully illustrated with tables, diagrams, graphs and photographs.

14T49



189. INVESTIGATION OF HEAT TRANSFER RESISTANCE IN A MODEL OVAL TUBE AIR PREHEATER. Kusnetsov, N. V. and Turilin, S. I. (Izvestia Vsesoyuznovo Teplotekh. Inst. (Bull. All Union Heat Engng Inst. U.S.S.R.), Aug. 1947, No.8 19-21). Deals with the results of heat transfer and hydraulic resistance tests in oval tubes, which show the advantages of using this cross-section in air-preheaters.

KUZNETSOV, N. V.

USSR/Engineering - Heat, Boiler Furnaces, Design

Jun 52

"Decrease of Heat Losses Caused by Outgoing Gases," P. D. Agnat'yev, I. I. Ogurtsov, T. I. Ivanova, Engineers, of GRES of Mosenergo, N. V. Kuznetsov, Cand Tech Sci, Ye. Ya. Titova, Engr, Boiler Lab, VTI

"Iz v-s Teplotekh Inst" No 6, pp 4-7

Discusses measures developed by joint efforts of VTI collaborators and GRES workers on the basis of so called creative cooperation. Describes constructional changes in furnaces of vertical water-tube boilers of 3- tons/hr productive capacity. Measures deal mainly with reconstruction of air-preheaters and installation of boiler-utilizers, steam from which is used in deaerators for heating feed water. New design decreases temp of outgoing gases from 215° to 154-170°C.

231T43

1. KUZNETSOV, N. V.; TURILIN, S. I., Eng.

2. USSR (600)

4. Steam Boilers

7. Effect of temperature on heat emission and resistance of tube surfaces to a crosswise current. Izv. VTI., 21 No. 11, 1952

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

1. KUZNETSOV, N. V.

2. USSR (600)

4. Steam Boilers

7. Changes in the steam surfaces of the boiler unit TsKTI-50-39F, and use of the air-preheater VTI.
Izv. VTI 21 No. 12, 1952

9. Monthly Lists of Russian Accessions, Library of Congress, March 1953, Unclassified.

KUZNETSOV, N.V

AID P - 1375

Subject : USSR/Electricity

Card 1/2 Pub. 26 - 2/30

Authors : Varavitskiy, I. B., Krol', L. B., and Kuznetsov, N. V., Kands of Tech. Sci.

Title : Reduction of temperature of outgoing flue-gas with the help of an improved design of the boiler

Periodical : Elek. Sta., 2, 4-8, F 1955

Abstract : The authors consider that at present the temperature of flue-gases is, as a rule, too high, and thus does not correspond to existing technical possibilities. The increase and improvement of the convection surfaces, and the use of low-pressure steam-economisers and of heat-salvaging boilers can, in certain cases, contribute to the efficiency of power plant cycles. This applies in particular to plants burning fuels containing moisture and sulfurous.

AID P - 1375

Elek. Sta., 2, 4-8, F 1955

Card 2/2 Pub. 26 - 2/30

The authors describe and illustrate new heating-surface arrangements which, in combination with heat-salvaging units, contribute to reduce the temperature of exit -gases and to protect exit heating surfaces from corrosion. 3 drawings

Institution: None

Submitted : No date

KUZNETSOV, N.V.

AID P - 1376

Subject : USSR/Electricity

Card 1/2 Pub. 26 - 3/30

Authors : Kuznetsov, N. V., Kand of Tech. Sci.
Titova, Ye. Ya., Eng and SHCHERBAKOV, A.Z.,
Kand of Tech Sci.

Title : Reduction of the temperature of outgoing flue-gas by adding small-size convection surfaces.

Periodical : Elek. Sta., 2, 8-12, F 1955

Abstract : The authors discuss the problem of reduction of heat losses caused by the high temperature of exit gases. They describe some methods which consist in the development of the existing flue-gas convection surfaces (economisers and air-preheaters), or in creating additional heat-salvaging surfaces (boilers, low temperature heaters, etc.). In more detail they describe the method applied by the All-Union Heat Engineering Institute, which consists in the introduction of small-size tubular

AID P - 1376

Elek. Sta., 2, 8-12, F 1955

Card 2/2 Pub. 26 - 3/30

air-preheaters. 3 diagrams and drawings.

Institution: None

Submitted : No date

Kuznetsov, N. V.

AID P - 2031

Subject : USSR/Engineering

Card 1/1 Pub. 110-a - 4/14

Author : Kuznetsov, N. V., Kand. of Tech. Sci.

Title : Abrasion of tubes by ashes and permissible velocities of flue gases in boilers

Periodical : Teploenergetika, 4, 18-24, Ap 1955

Abstract : The author establishes a new formula computing the extent of the abrasion of water tubes caused by ash particles striking the tube surface. He determines on the basis of this formula the permissible maximum velocity for gases in boiler ducts. Tables and 6 diagrams. Two Russian references, 1951.

Institution: All-Union Heat Engineering Institute

Submitted : No date

Kuznetsov, N. V.

AID P - 2077

Subject : USSR/Electricity

Card 1/1 Pub. 26 - 19/29

Authors : Kuznetsov, N. V., and Karasina, E. S., Kands. of Tech. Sci.

Title : Cast iron air-preheater with ribbed fins

Periodical: Elek. sta., 4, 49-50, Ap 1955

Abstract : The author discusses the wide use of cast iron air-heaters made of pipes ribbed inside and out and gives data and a detailed description of their design.

Institution: None

Submitted : No date

Kuznetsov, N. V.

V 547. OPTIMUM GAS VELOCITIES AND A TECHNICAL AND ECONOMIC COMPARISON OF HEATING SURFACES WORKING UNDER PRESSURE. Kuznetsov, N.V., Shcherbakov, A.Z., Titova, E.Ya. and Chernyak, V.M. (Teploenergetika (Heat Pwr Engng, Moscow), Aug. 1955, 3-10). A theoretical examination of gas velocities and the shape of heating surfaces in superheaters and economizers in view of recent findings on heat transfer and the fouling of tubes by ash. (L).

KUZNETSOV, N.V.

AID P - 2562

Subject : USSR/Engineering

Card 1/1 Pub. 110-a - 1/16

Authors : Kuznetsov, N. V., Shcherbakov, A. Z., Kands. Tech. Sci., and Titova, Ye. Ya., Chernyak, V. N., Engs.

Title : Most efficient gas velocities and comparison of data of heating surfaces operating under pressure

Periodical : Teploenergetika, 8, 3-10, Ag 1955

Abstract : The authors determine the most efficient velocity for gas flow in economizers and superheaters on the basis of research on heat transfer, aerodynamic resistance and scale deposits in tubes. A comparison between different shapes of heating surfaces is made in order to demonstrate possibilities for the improvement of convected sections in the boiler design. Nine diagrams, 8 Russian references, 1935-1955.

Institution: All-Union Heat Engineering Institute

Submitted : No date

KUZNETSOV, N.V.

AID P - 2761

Subject : USSR/Engineering

Card 1/1 Pub. 110-a - 3/14

Authors : Kuznetsov, N. V. and Shcherbakov, A. E., Kands. Tech. Sci., Titova, E. Ya. and Chernyak, V. Ya., Engs.

Title : Optimal velocities of air and smoke gases in air-heaters and a technical and economical comparison of heated surfaces

Periodical : Teploenerg., 9, 18-21, S 1955

Abstract : Preheaters of different types, such as plate, tubular, cast-iron ribbed and corrugated iron, and their operation are discussed. The most efficient velocity of air and gas in ducts is mathematically analyzed with equations and tables. Five diagrams. Three Russian references, 1946-1955.

Institution : All-Union Heat Engineering Institute

Submitted : No date

KUZNETSOV, N. V.

PERIODICAL ABSTRACTS

AID 4161 - P

Sub.: USSR/Engineering

GURVICH, A. M. and N. V. KUZNETSOV
IZMENENIYA I DOPOLNENIYA K PROYEKTU NORM TEPLOVOGO RASCHETA KOTEL'NYKH AGREGATOV (Changes and additions to the standard specifications for heat computation of boiler units).
Teploenergetika, no. 1, Ja 1956: 60.

Some additional paragraphs included in the latest edition of the standard specification directives are listed.

Name: KUZNETSOV, Nikolay Vasil'yevich

Dissertation: Improvement of Convective Surfaces of Boiler Units and Methods of their Calculation on the Basis of Study of Physical Processes

Degree: Doc Tech Sci

Affiliation: All-Union Order of Labor Red Banner Heat Engineering Sci Res Inst imeni Dzerzhinskiy

Defense Date, Place: 4 May 56, Council of Moscow Order of Lenin Power Engineering Inst imeni Molotov

Certification Date: 17 Nov 56

Source: BMVO 6/57

Kuznetsov, N V.

AID P - 4432

Subject : USSR/Heat Engineering

Card 1/1 Pub. 110-a - 12/13

Author : Kuznetsov, N. V., Kand. Tech. Sci.

Title : Letter to the editors

Periodical : Teploenergetika, 6, 62-63, Je 1956

Abstract : The author refers to an article on ash in conduits and gas velocity limits in boilers published in the No. 4, 1955 issue of this journal and severely criticizes the statements made. One diagram.

Institution : None

Submitted : No date

KUZNETSOV, N.V.

KUZNETSOV, N.V., doktor tekhn. nauk; LUZHNOV, G.I., inzh.; BELOBORODOV, F.M., inzh.

Cast-iron shot cleaning of the convective surfaces of boiler units. Teploenergetika 4 no.12:3-9 D '57. (MLRA 10:11)

1. Vsesoyuznyy teplotekhnicheskiy institut i Omskaya TETs - 3.
(Boilers)

KUZNETSOV, Nikolay Vasil'yevich; NIKOLAYEV, V.V., red.; BORUNOV, N.I., tekhn.red.

[Working processes and problems in improving boiler-unit convection surfaces] Rabochie protsessy i voprosy usovershenstvovaniia konvektivnykh poverkhnostei kotel'nykh agregatov. Moskva, Gos. energ. izd-vo, 1958. 171 p. (MIRA 12:1)
(Heat--Convection) (Boilers)

KUZNETSOV, N V

AUTHOR: Ostinskiy, A.P. 96-4-21/24

TITLE: A conference on the construction of the tail surfaces of boilers operating on sulphurous fuels. (Soveshchaniye po konstruktsiyam khvostovykh poverkhnostey kotlov, rabotayushchikh na vysokosernistykh toplivakh).

PERIODICAL: Teploenergetika, 1958, No.4, pp.91-92 (USSR).

ABSTRACT: A scientific-technical conference on the development of new types of tail surfaces for boilers working on sulphurous fuels was convened by the Perm Power Directorate and the Regional Division of NTOEP and held in Perm in October, 1957. The conference was attended by representatives of power systems working on sulphurous fuels and also by representatives of the All-Union Thermo-technical Institute, the Eastern Branch of the All-Union Thermo-Technical Institute, the Central Boiler Turbine Institute, ORGRES and the Taganrog Boiler Works. Ten reports were made about investigations of sulphur corrosion, corrosion protection, and the development of new types of tail surfaces for boilers.
Dr. Tech. Sc. N. V. Kuznetsov reported on the work of the All-Union Thermo-Technical Institute on the causes of sulphur corrosion of boiler heating-surfaces. The Chief Engineer of Permenergo, P. F. Kochunov, described

Card 1/3

A conference on the construction of the tail surfaces of boilers operating on sulphurous fuels.

successful experience with cast-iron elements and also with enamel protection on steel tubes. The representative of Mosenergo, Engineer Belyanin, also endorsed cast-iron elements. Engineer Mazel' of Bashkirenergo recounted the successful use of chemical additives to reduce corrosion and wear of tubes when burning Bashkirian fuel oil. Engineer V. V. Kazanskiy of Permenergo discussed methods of enamelling water-heater tubes and the resistance to corrosion of different sorts of enamel.

R. A. Petrosyan of the All-Union Thermo-Technical Institute described the reconstruction of the tail part of a boiler in the Zakamsk Heat and Electric Power Station.

Cand.Tech.Sc. I. B. Varavitskiy of the All-Union Thermo-Technical Institute reported a new arrangement of tail heating surfaces with gas evaporators and steam heating of water adopted at the Kizelovsk regional electric power station.

Dr. Tech.Sc. N. V. Kuznetsov of the All-Union Thermo-Technical Institute, Engineer Lindkvist of Sverdlovenergo and Engineer Lakhman spoke on the theory, design and

 operation of small coiled heating surfaces, which have

A conference on the construction of the tail surfaces of boilers operating on sulphurous fuels.

been widely used in power stations in the Urals. Engineer Pitertsev of the Eastern Branch of the All-Union Thermo-Technical Institute reported on investigations of the best temperature conditions for flue gases and feed water. Participants in discussions included Engineers Domidov of Uralenergo and Fel'shtinskaya of Sverdlovenergo. The Conference recommended that boilers burning solid sulphurous fuels should have cast-iron air heaters. Mention was made of successful experience of the use of enamel and of additives to fuel oil. Future plans for the introduction and testing of new types of air-heaters were noted. The Conference directed the attention of the technical directorate of the Ministry of Power Stations and the All-Union Thermo-Technical Institute to the need for making combined investigations to prevent corrosion of boiler heating-surfaces and ash-removal equipment.

AVAILABLE: Library of Congress.

Card 3/3

96-1-2/31

AUTHORS: Kuznetsov, N.V., Doctor of Technical Sciences and Luzhnov, G.I., Engineer.

TITLE: Problems in the Design of Equipment for Cleaning Convection Surfaces of Boilers by Shot (Voprosy proyektirovaniya ustroystv dlya dobevoy ochistki konvektivnykh poverkhnostey kotel'nykh agregatov)

PERIODICAL: Teploenergetika, 1958, Vol.5, No.1, pp. 8 - 12 (USSR)

ABSTRACT: In an article in Teploenergetika, 1957, No.12, the authors described an equipment installed at a power station for removing slag from boiler surfaces by means of iron shot. The main disadvantage was the high wastage of shot, much of which was found in the horizontal gas way beyond the convection shaft, in the furnace, and elsewhere. A diagram (Fig.1) shows how shot falling from above rebounded from the walls and could fall into the horizontal gas way. To prevent this, the boilers of Omsk Heat and Electric Power Station No.3 were modified by fitting special screen grids on the sloping walls of the lower bunkers, as seen in Fig.2. Re-designed shot cleaning equipment will use these deeper bunkers of different wall shape.
Shot is also carried away by the flow of air when the plane shutters in the gas way are open. The difficulty may be overcome by N.I. Zverev's method of cleaning the shot of ash. This

Cardl/3

Problems in the Design of Equipment for Cleaning Convection Surfaces of Boilers by Shot.

system is applied in the new design of shot cleaning equipment for the boiler type TП-230, as illustrated in Fig.3. A special chamber used to regulate the air flow is illustrated in Fig.4 and a new type of shot-distributing device, shown in Fig.5, is recommended.

In the first installations, the shot was lifted by compressed air but it is uneconomical to use a stationary compressor for this purpose. Lifting by steam is inconvenient because condensation occurs when the equipment is cold. It is best to follow non-Russian practice and to use a high head extraction fan. Alternatively, steam ejectors can be used as a temporary measure, but occasioned some difficulty in adjusting the air flow to suit the required flow of shot. A newly-designed feeder (illustrated in Fig.6) gives regular and stable delivery of shot at any flow required.

The pneumatic delivery often became blocked in service; remedies are described. Wear in parts exposed to flow of shot was also overcome. In the design of boilers to burn fuel that forms hard ash deposits, all convective surfaces should be located in vertical gas ways with horizontal tubes. In this

Problems in the Design of Equipment for Cleaning Convection Surfaces of Boilers by Shot.

case, shot cleaning can completely overcome interruptions caused by deposits.
Tests at the Zakamsk Heat and Electric Power Station (Zakamskaya TETs) show that when the temperature is below the dew point, heavy ash deposits are formed and more frequent cleaning is required. Therefore, equipment operating below the dew point should also be arranged in vertical shafts suitable for shot cleaning. Further recommendations are made about the arrangement of the equipment. There are 6 figures.

ASSOCIATION: All-Union Thermo-technical Institute (Vsesoyuznyy Teplotekhnicheskiy Institut)

AVAILABLE: Library of Congress.

Card 3/3

SOV/96-59-10-9/22

AUTHORS: Kuznetsov, N.V. (Dr.Tech.Sci.); Luzhnov, G.I. (Engineer); Varichev, V.A. (Engineer); Pavlenko, L.I. (Engineer); and Kurganov, B.G. (Engineer)

TITLE: Experience of the Adjustment of Shot-blast Installations for Removing Ash Deposits from Boiler Heating Surfaces

PERIODICAL: Teploenergetika, 1959, Nr 10, pp 49-54 (USSR)

ABSTRACT: Previous articles in Teploenergetika Nr 12, 1957, and Nr 1, 1958, described the use of shot-blasting to clean boilers type TP-230-2 at the Omsk Heat and Electric Power Station when burning fuel oil of high ash, and high sulphur content. Subsequently the design of the equipment was improved and it was tried out at a number of power stations burning anthracite dust, including the Nesvetay GRES (power station) on the Rostov Power system. When anthracite dust is burned, heating surfaces quickly become contaminated and cleaning is particularly important. In the Nesvetay station shot-blasting equipment was installed on boilers of 110 tons per hour operating at steam conditions of 122 ats. and 485 °C. The boilers are briefly described: the proportion of unburned material in their carry-over is of the order of 8-12%. Until the shot-blasting installation was put in, the boilers could

Card 1/4

Experience of the Adjustment of Shot-blast Installations for Removing Ash Deposits from Boiler Heating Surfaces

operate for 1 to 1½ months, during which the resistance of the convection duct increased by more than 100 mm water and the outgoing flue gas temperature rose by 25-30 °C. Typical curves showing the increase in resistance and flue gas temperature during a month's operation are given in Fig 1. The shot-blasting installation was generally similar to that previously described, but various changes were made and are described in some detail. Outline drawings of the modified shot-blasting installation are given in Fig 2. To reduce losses of shot to atmosphere, the shot traps were reconstructed, to the form illustrated in Fig 3. It was found necessary to fit pieces of wire 1 mm diameter on the conical shutters at the bottom of the shot traps so that a certain amount of air could leak round the shutter and equalise the pressure above it. The results of pressure measurements using the modified shutter are plotted in Fig 5. Minor modifications were made to the ash bunkers to prevent loss of shot to them. The shot bunkers were made of conical section instead of square, and the shot feeders were modified, a new type of

shutter being used. A few other modifications were also made. To clean convective heating surfaces efficiently it is necessary to pass 200-300 kg of shot per square metre of duct section. The area of the convective ducts of the boilers in question was 20.7 m^2, and shot was delivered at a total rate of 4700 kg/hr, which corresponds to 230 $kg/m^2/hr$. If the equipment is used regularly an operating time of one hour twice a shift is satisfactory. Tests were made to see whether shot-blasting could be used to clean up badly-contaminated surfaces. The results are plotted in Fig 7 and it will be seen that although about 9 tons of shot were passed through the convection shaft there was no reduction either in the resistance to flow or in the flue gas temperature. Subsequent examination showed that some of the shot was resting on top of the existing deposits, which were not removed. Therefore, for shot-blasting to be effective the heating surfaces must be cleaned in the first place and the equipment must be used regularly. Data on the resistance to flow and flue gas temperatures during six weeks' operation with regular use of the shot blasting equipment are plotted in Fig 8.

Experience of the Adjustment of Shot-blast Installations for Removing Ash Deposits from Boiler Heating Surfaces

The resistance to flow was maintained constant throughout this period and variations in flue gas temperature resulted only from variations in feed-water temperatures. After 45 days' operation with shot-blasting, the economiser and water heater remained clean and ash deposits were found only in places not reached by the shot. The loss of shot was about 0.6% of the total quantity passed and this could be further reduced by minor design changes. The equipment is reliable and the main parts may be used for the design of similar installations for boilers of other types burning other fuels.

There are 8 figures and 2 Soviet references.

ASSOCIATION: Vsesoyuznyy teplotekhnicheskiy institut, Rostovenergo and Nesvetay GRES (All-Union Thermo-Technical Institute, Rostovenergo (Power System) and Nesvetay Regional Electric Power Station)

KUZNETSOV, N.V., doktor tekhn.nauk; LUZHNOV, G.I., inzh.; GAVRILOV, A.F.; SEME NOVA, T.F.

Preventing peening in shot blasting cleaning of heating surfaces. Teploenergetika 7 no.10:27-31 O '60. (MIRA 14:9)

1. Vsesoyuznyy teplotekhnicheskiy institut.
(Boilers--Cleaning)

KUZNETSOV, N.V., doktor tekhn.nauk; ZRODNIKOV, S.Ye., inzh.

Seminar on new methods of removing ash deposits from heating surfaces. Teploenergetika 7 no. 12:90-91 D '60. (MIRA 14:1)
(Boilers--Cleaning)

MAKAROV, M.M.; KUZNETSOV, N.V.

Kinetics of the drying of asbestos paper. Khim. i khim. tekh. 1:355-362 '62. (MIRA 17:2)

KROPP, L.I., inzh; KUZNETSOV, N.V., doktor tekhn. nauk; YEREMIN, I.Ya., inzh.; RODIONOV, V.A., inzh.

Study of a vibrational method for cleaning a screen-type steam superheater in the TP-17 boiler operating on pulverized shale. Teploenergetika 10 no.11:32-38 N '63. (MIRA 17:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy teplotekhnicheskiy institut i Turbinno-kotel'nyy zavod.

KROPP, L.I., inzh.; KUZNETSOV, N.V., doktor tekhn. nauk

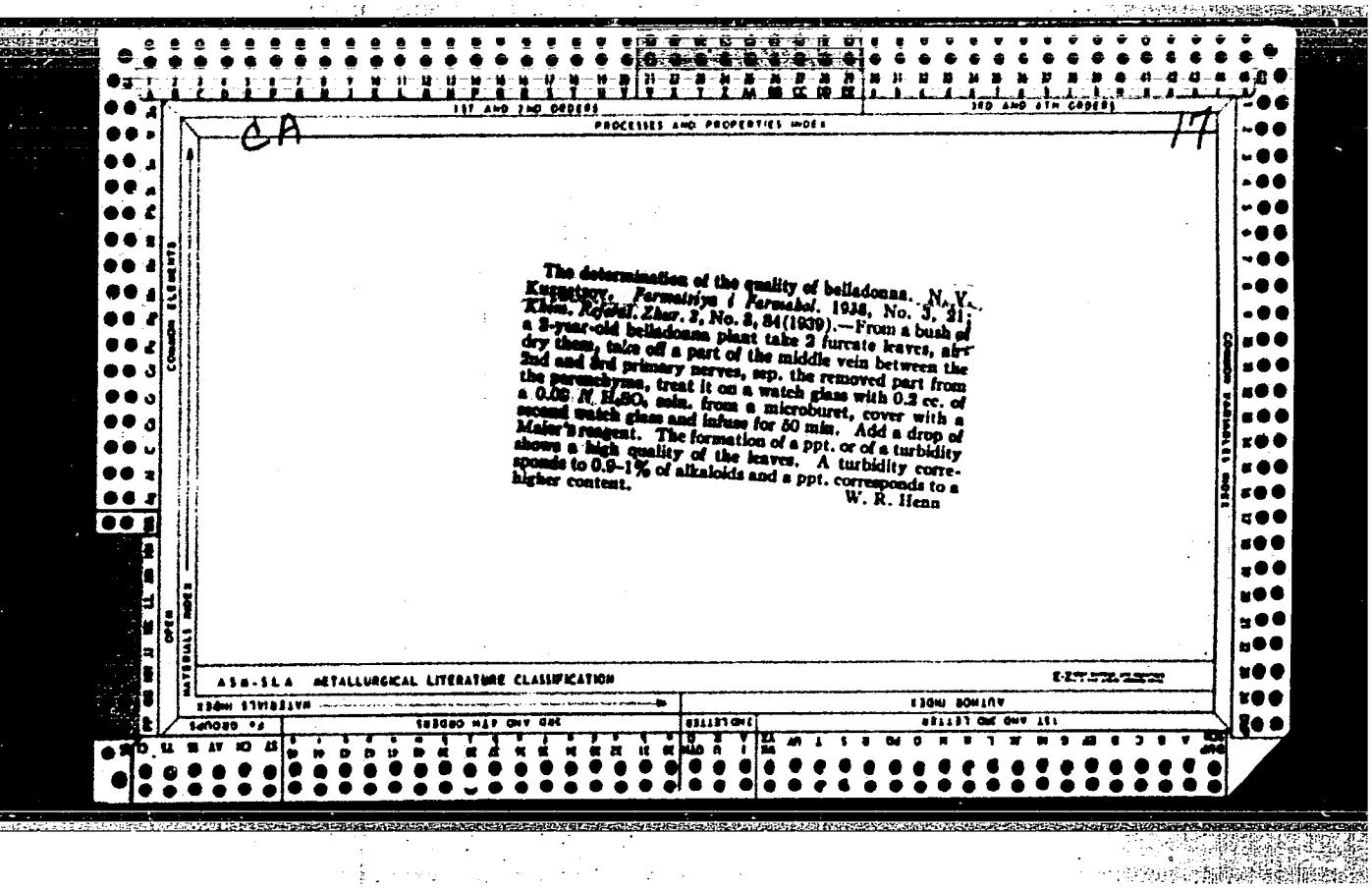
Study of a vibrational method for cleaning a convective steam superheater. Teploenergetika 11 no.2 42-46 F '64. (MIRA 17:4)

1. Vsesoyuznyy teplotekhnicheskiy institut.

KUZNETSOV, N.V., doktor tekhn. nauk, prof.; GAVRILOV, A.F., inzh.

Air heater with intermediated heat carrier. Teploenergetika 11 no.10:30-34 O '64. (MIRA 18:3)

1. Vsesoyuznyy teplotekhnicheskiy institut.



The determination of the quality of belladonna. N. V. Kupriyev. *Farmatsiya i Farmakol.* 1938, No. 5, 21; *Khim. Referat. Zhur.* 3, No. 3, 84(1939).—From a bush of a 3-year-old belladonna plant take 2 furcate leaves, air-dry them, take off a part of the middle vein between the 2nd and 3rd primary nerves, esp. the removed part from the parenchyma, treat it on a watch glass with 0.2 cc. of a 0.05 *N* H_2SO_4 soln. from a microburet, cover with a second watch glass and infuse for 50 min. Add a drop of Mayer's reagent. The formation of a ppt. or of a turbidity shows a high quality of the leaves. A turbidity corresponds to 0.9–1% of alkaloids and a ppt. corresponds to a higher content.

W. R. Henn

NAZAROV, I.N.; KOTLYAREVSKIY, I.L.; KUZNETSOV, N.V.

Catalytic transformations of cyclohexanone and 2,4-dimethyl-cyclopentanone over aluminum oxide. Zhur. Obshchey Khim. 22, 1147-9 '52. (MLRA 5:8)
(CA 47 no.14:6876 '53)

KUZNETSOV, N.V.

Chem

Chemical Abst.
Vol. 48 No. 5
Mar. 10, 195[illegible]
Organic Chemistry

The catalytic transformations of cyclohexanone and 2,4-dimethylcyclopentanone over aluminum oxide. I. N. Nazarov, I. Ia. Kotlyarevskii, and N. V. Kuznetsov. *J. Gen. Chem. U.S.S.R.* 22, 1103-5(1952)(Engl. translation). See *C.A.* 47, 6870f. II. Ia. II.

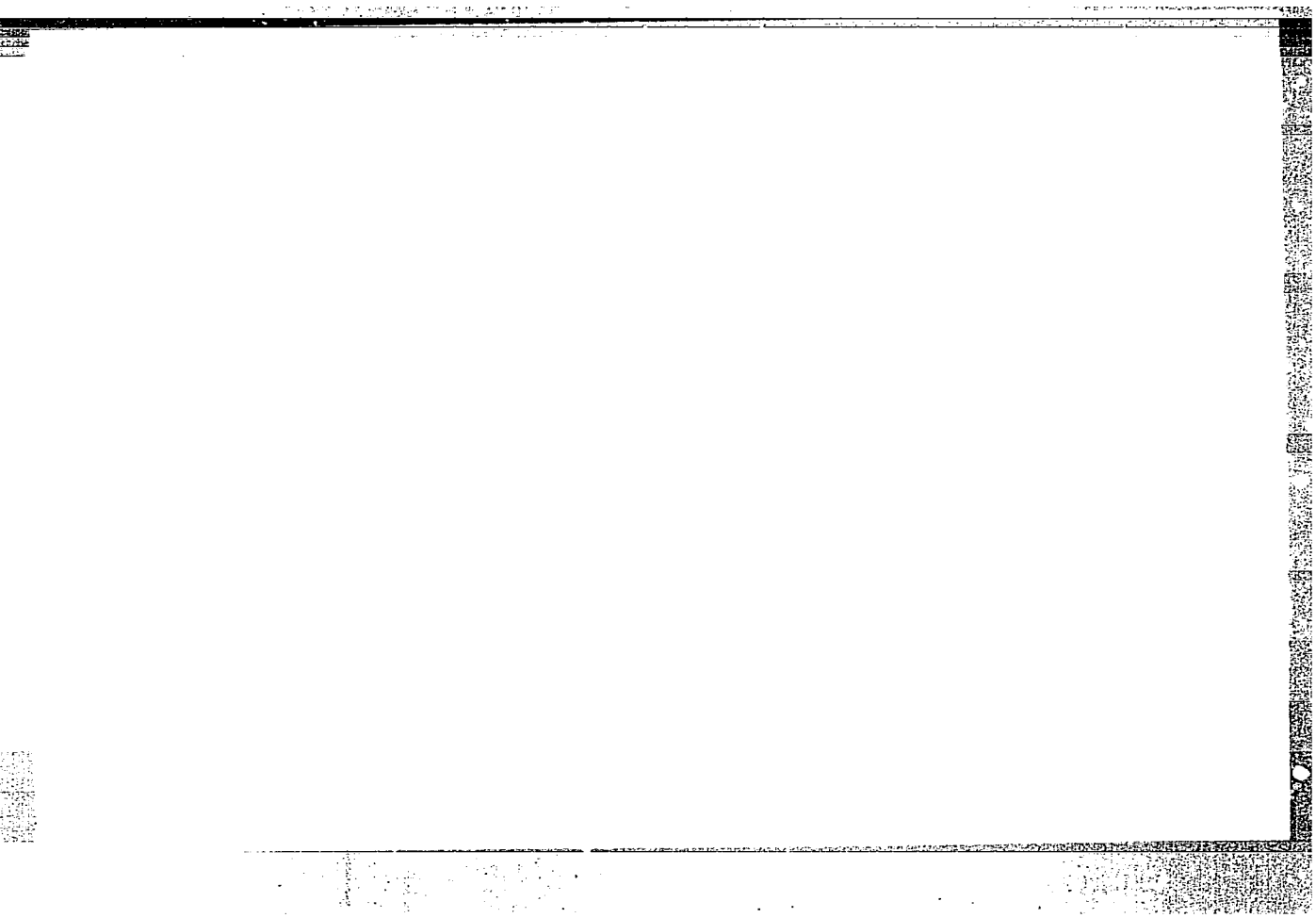
AF 1-28-54

NAZAROV, I. N., KOTLYAROVSKIY, I. L., KUZNETSOV, N. V.

Ketones

Catalytic conversions of cyclohexanone and 1, 3-dimethylcyclopentane-5-one with aluminum oxide. Zhur. ob. khim. 22 no. 7, 1952.

Monthly List of Russian Accessions, Library of Congress, November 1952. UNCLASSIFIED.



APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000928130001-7"

Kuznetsov, N.V.

USSR/Chemistry - Synthesis

Card 1/1 Pub. 22 - 31/63

Authors : Nazarov, I. N., Academician.; Kuznetsov, N. V.; and Semenovskiy, A. V.

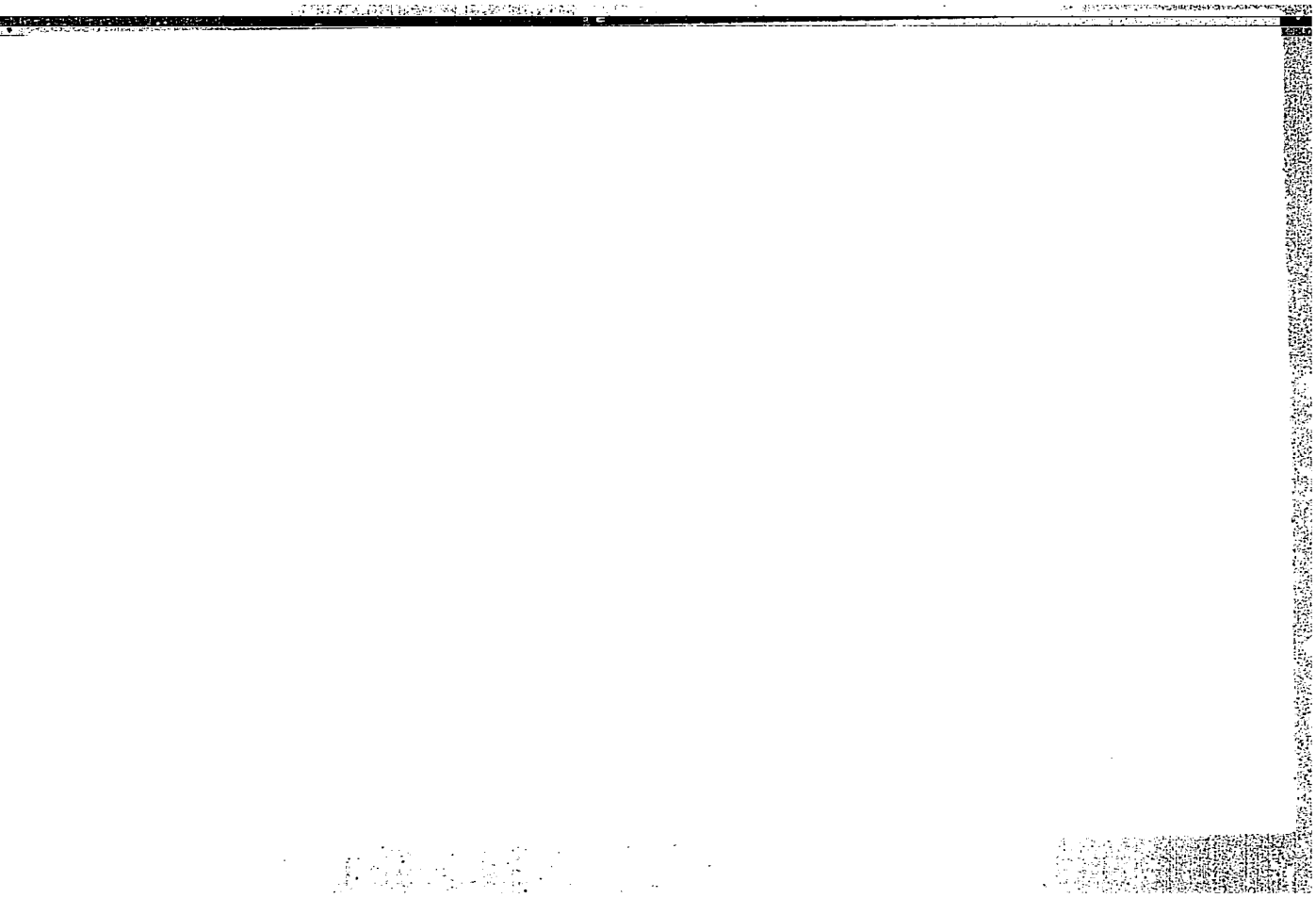
Title : Derivation of aromatic acids through the oxidation of the side chains in aromatic compounds with HNO_3

Periodical : Dok. AN SSSR 99/6, 1003-1006, Dec 21, 1954

Abstract : Experimental data, regarding the oxidation of side chains of aromatic compounds with diluted nitric acid, are presented. It is evident from the above given data that diluted HNO_3 at a high temperature (about 200°) smoothly oxidizes all the different side chains of aromatic compounds of a normal and branched nature and including various compounds containing different functional groups. The oxidation of aromatic derivatives with HNO_3 is sometimes accompanied by the nitration process which leads to the formation of additional products - nitrobenzoic acid. The effect of HNO_3 concentration, on the yield of oxidation products, is explained. Five references: 2-USA; 1-English and 2-Scandinavian (1949-1954). Table.

Institution: Academy of Sciences USSR, The N. D. Zelinskiy Institute of Organ. Chemistry

Submitted: November 9, 1954



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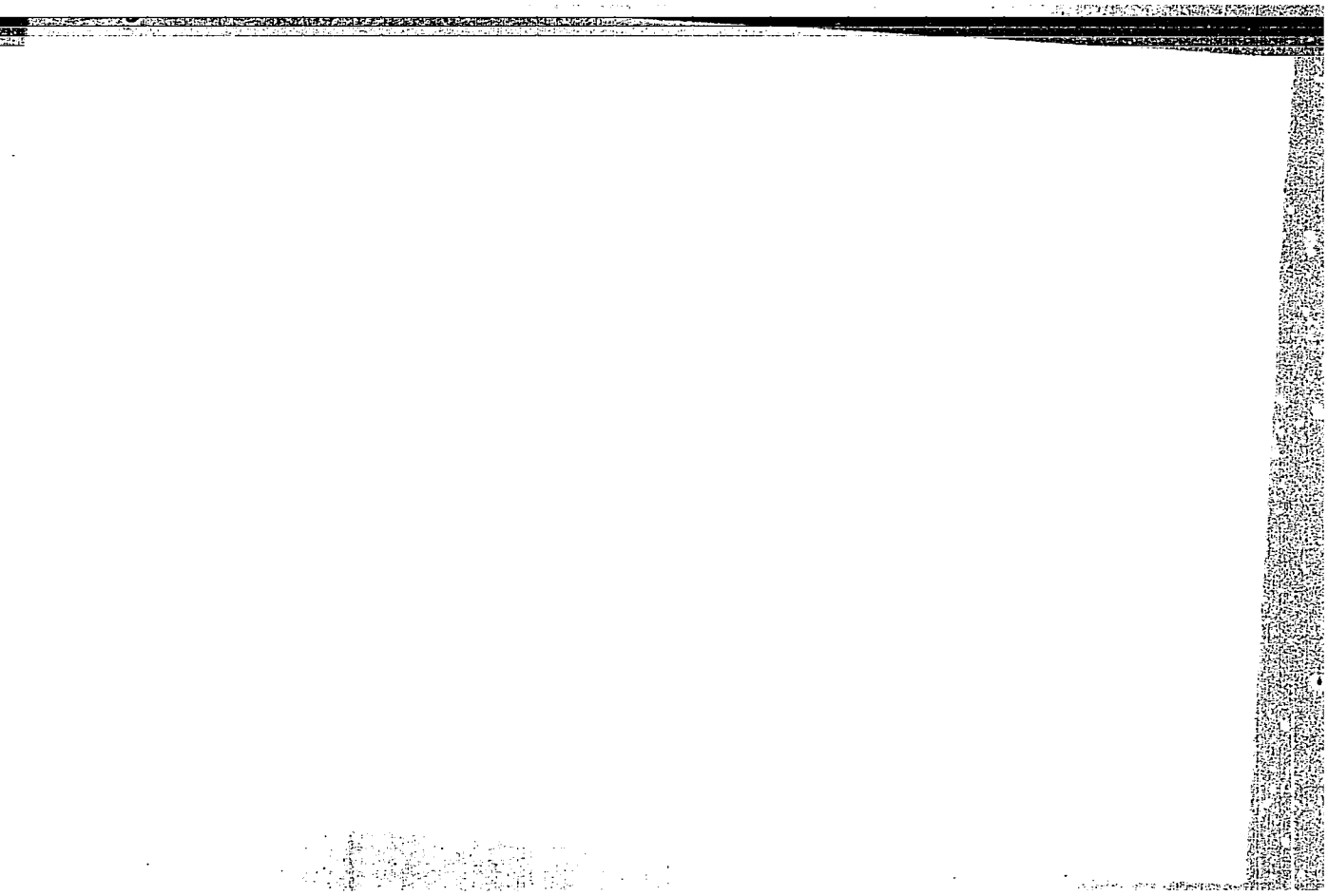

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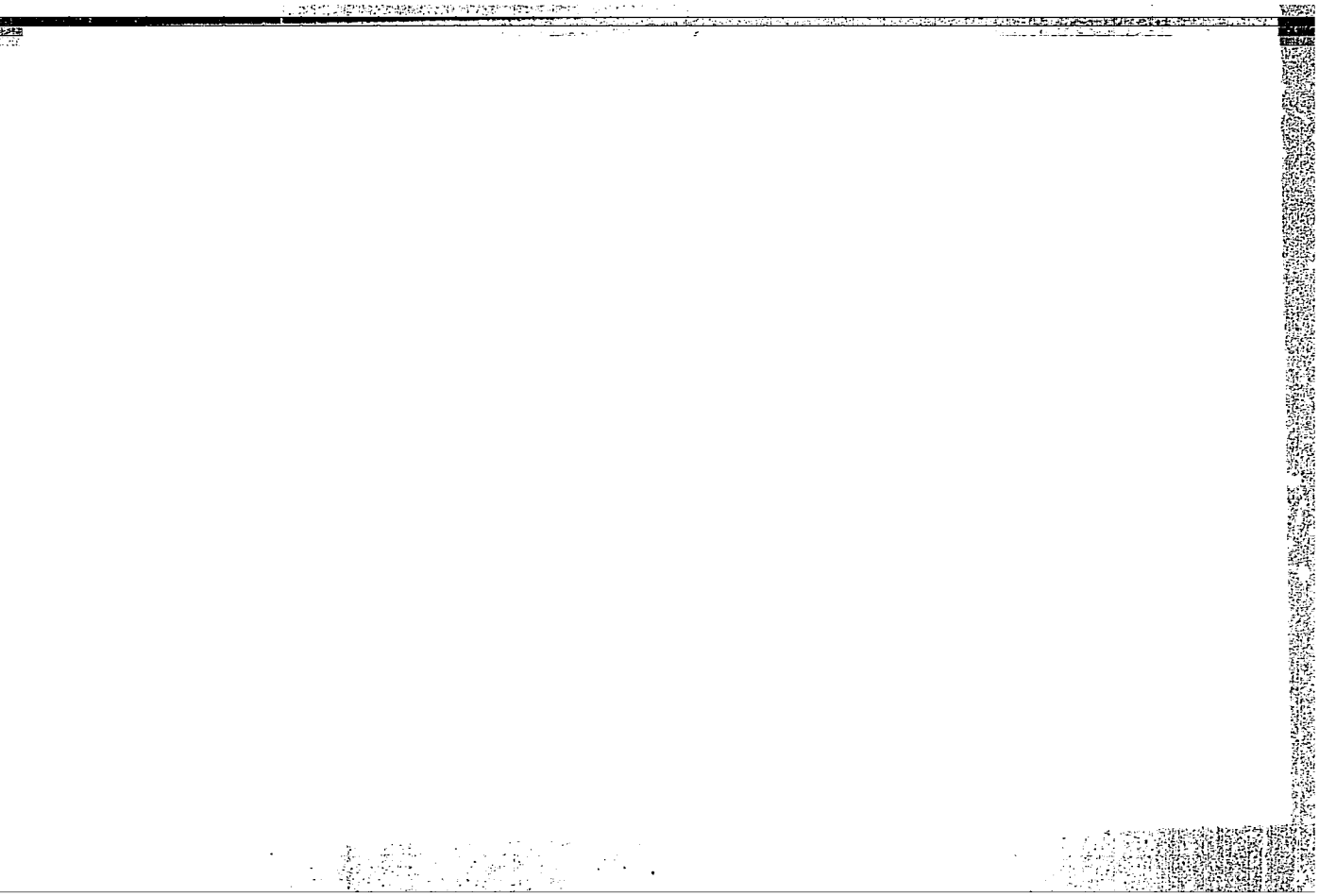

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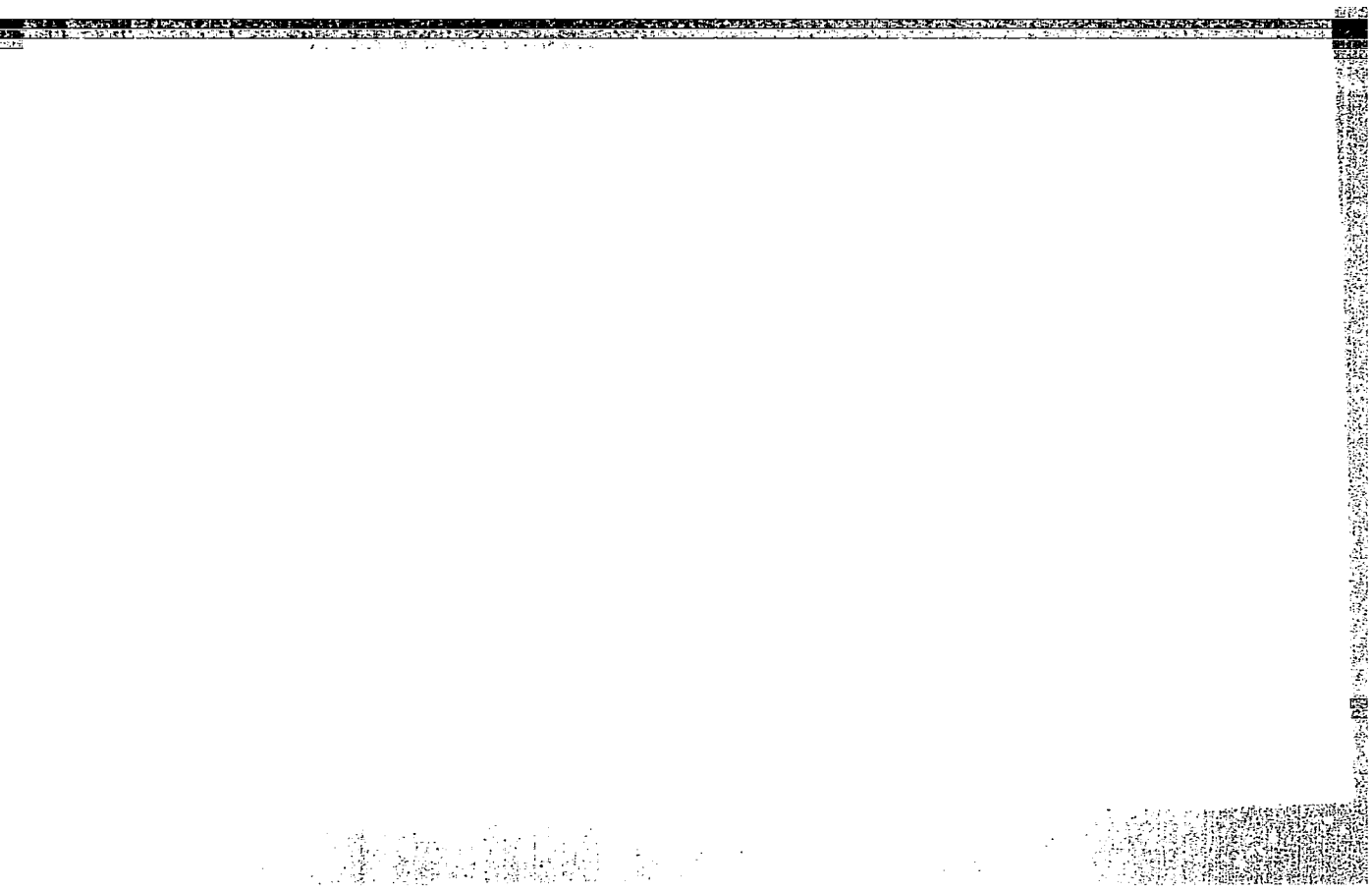

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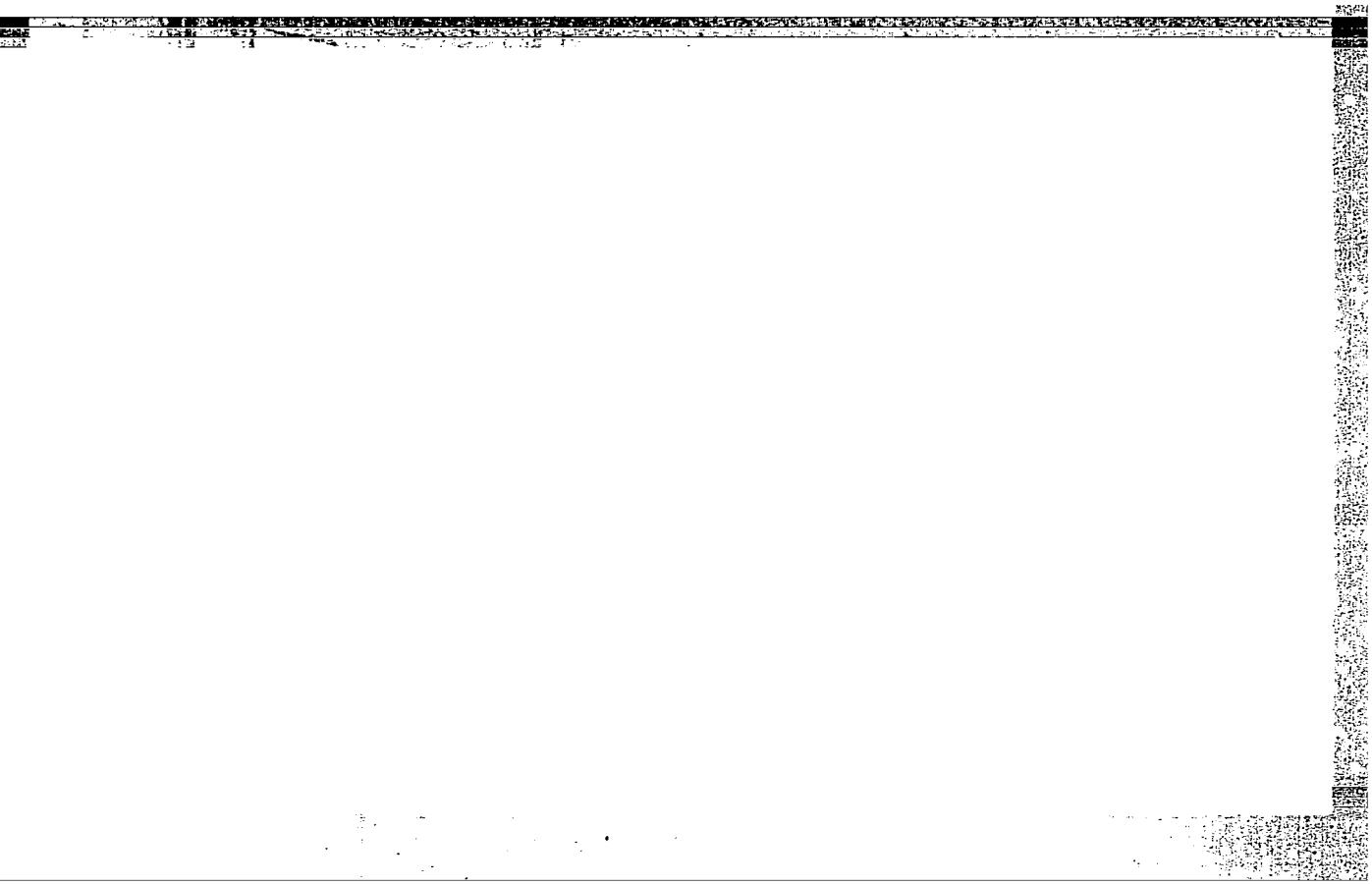

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000928130001-7"

KUZNETSOV, N.V.

62-58-4-27/32

AUTHORS: Nazarov, I. N., Kuznetsov, N. V.

TITLE: Synthesis of Cyclic γ-Diamines (Sintez tsiklicheskikh γ-diaminov)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Khimicheskikh Nauk, 1958, Nr. 4, pp. 516 - 518 (USSR)

ABSTRACT: For elaborating a method for the synthesis of diene compounds with a fixed transoidal system of compounds of the type of methylenecyclohexane it was necessary to produce cyclic γ-diamines. These belong to the difficulty approachable substances. The production of cyclic γ-diamines can either be realized by the reduction of the oxime of β-aminoketone or by reducing amination of β-aminoketones (see formulae). In references there are descriptions of a catalytic hydration of oximes of β-aminoketones. Here an hydrogenolysis of the molecule with simultaneous splitting-off the amine takes place and it was possible to obtain diamines this way. It was found that the hydrogenation of the oximes can in any way be rea-

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Synthesis of Cyclic γ-Diamines

lized in smallest methanol quantities (ammonia-saturated) in the presence of a great quantity of nickel (Reneya) at a reaction temperature of not above 40°C. The hydrogenation of oxim-2-dimethylaminomethylcyclohexane supplies a yield of about 70% of 2-dimethylaminomethylcyclohexylamine. 2-dimethylaminomethylcyclopentanone-oxime supplies the corresponding diamine in a 50% yield. It was shown that the dioxide can easely be converted into methylene-cyclohexene. There are 9 references, 1 of which is Soviet.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute for Organic Chemistry imeni N. D. Zelinskiy, AS USSR)

SUBMITTED: December 6, 1957

AVAILABLE: Library of Congress

Card 2/2

1. Cyclic compounds—Synthesis

5(3) SOV/62-59-2-29/40

AUTHORS: Nazarov, I. N., Kuznetsov, N. V.

TITLE: Synthesis of 1,2-Diacetyl Cyclanes (Sintez 1,2-diatsetil-tsiklanov)

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye khimicheskikh nauk, 1959, Nr 2, pp 354-355 (USSR)

ABSTRACT: In the present news in brief the authors report on a general method of synthesis of diacetyl cyclanes. As initial products corresponding keto nitriles (III) were used which had been obtained by addition of hydrocyanic acid to acetyl cyclenes (II) (Ref 2). The nitrile of the acetyl cyclopentane carboxylic acid (III) (n=3) was obtained from acetyl cyclopentene in an 80% yield. On saponification with a methanol solution of hydrogen chloride the methyl ester of acetyl cyclopentane-carboxylic acid (IV) (n=3) was formed at 0°. For the synthesis of 1,2-diacetyl cyclopentane (VI) (n=3) the nitrile of acetyl-cyclopentane carboxylic acid (III) was easily converted into a corresponding ketal (V) (n=3). This yielded after reaction with methyl magnesium iodide and acid saponification the diacetyl cyclopentane in a considerable yield. In a similar way also the

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diacetyl cyclohexane was obtained. On oxidation with alkaline sodium hypochlorite solution these ketones were transformed accordingly into known trans-cyclopentane and cyclohexane dicarboxylic acids. There are 3 references, 1 of which is Soviet.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences, USSR)

SUBMITTED: July 4, 1958

SOV/62-59-4-15/42

5(3)

AUTHORS: Nazarov, I. N., Kuznetsova, A. I., Kuznetsov, N. V., Titov, Yu. A.

TITLE: Diene Condensations of 1,3-Dimethylbutadiene With Asymmetric Dienophilic Compounds (Diyenovyye kondensatsii 1,3-dimetil-butadiyena s nesimmetrichnymi diyenofilami)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 4, pp 663-667 (USSR)

ABSTRACT: In the present work the condensation of 1,3-dimethylbutadiene with methyl acrylate and methylmethacrylate and with acrylonitryls was investigated. By heating 1,3-dimethylbutadiene with methyl acrylate at 220° a mixture of adducts (V) and (VI) in a yield of 60% was obtained. The asymmetric isomer (V) was predominant. The adducts were dehydrogenated on carbon-supported palladium at 350°. The saponification of the dehydrogenation products gave a 26 : 1 mixture of known 2,4- and 3,5-dimethylbenzoic acids. The condensation of 1,3-dimethylbutadiene with methyl methacrylate at 220° gave the adducts (VII) and (VIII) in a yield of 76%, the asymmetric isomer (VII) being again highly predominant. The saponification of the adducts gave a

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Diene Condensations of 1,3-Dimethylbutadiene With Asymmetric Dienophilic Compounds

SOV/62-59-4-15/42

mixture of liquid acids. The dehydrogenation of the mixture on carbon-supported palladium gives a mixture of trimethylbenzenes. The oxidation under pressure of this mixture diluted with nitrogenous acid gave an 18 : 1 mixture of trimellitic and trimesic acids. By heating 1,3-dimethylbutadiene with acrylonitryl at 220° a 13 : 1 mixture of cyclic nitryls (IX) and (X) was obtained in a yield of 74%. Their structure was proved by the dehydrogenation to corresponding aromatic nitryls, which formed 2,4- and 3,5-dimethylbenzoic acids upon saponification. Thus it has been shown for the first time that mixtures of structure-isomeric adducts are formed by the condensation of 1,3-disubstituted butadienes with asymmetric dienophilic compounds. There are 5 references, 1 of which is Soviet.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences, USSR)

SUBMITTED: July 9, 1957

Card 2/2

5 (3) SOV/79-29-3-5/61

AUTHORS: Nazarov, I. N. (Deceased), Gurvich, I. A., Aleksandrova, G. V. Kuznetsov, N. V., Vasil'yev, A. F.

TITLE: Stereochemistry of the Synthesis of Acetylene With Bicyclic Ketones (Stereokhimiya atsetilenovogo sinteza c bitsiklicheskimi ketonami). Synthesis of Cis-1-ethynyl-1-oxy-6-decalone. Absorption Spectra of the Series of Tert.α-decalols (Sintez tsis-1-etinil-1-oksi-6-dekalona. Spektry pogloshcheniya ryada tretichnykh α-dekalolov)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 3, pp 753-761 (USSR)

ABSTRACT: Proceeding from the experience acquired in their earlier experiments (Refs 1-3) the authors interpreted the configuration of the substituents at the C_1 in the alcohol (I) and in the product of its hydration (II) on the basis of the reactivity of these substituents. In the work under review the condensation of cis-methoxyoctalone (III) with sodium acetylenide was carried out in liquid ammonia and after saponification of the reaction product acetylene alcohol (IV) was obtained as chief product, besides small quantities of isomeric acetylene alcohols (IVa and IVb). Compound (IV) in methanol in the presence of sulphuric mercury smoothly hydrates into decalone(V),

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Stereochemistry of the Synthesis of Acetylene With Bicyclic Ketones. Synthesis of Cis-1-ethynyl-1-oxy-6-decalone. Absorption Spectra of the Series of Tert.α-decalols

which easily forms bis-2,4-dinitrophenyl hydrazone. On the basis of the latter two easy reactions it must be assumed that both compounds have the same spatial arrangement of the side chain and of hydroxyl at the C_1, like cis-ethynyl decalol (I) and the corresponding acetyl derivative (II). In hydrogenation, compound (IV) yields ethyl decalone (VI) in crystals, which by reduction yields diol (VII) (Scheme 2). In the reaction with (III) and subsequent saponification, ethyl magnesium bromide yields an oil, which by reduction forms ethyl diol (VII). In the reaction of ethyl magnesium iodide with (VIII) an oil is formed, which in reduction forms the isomeric diol (X). (X) yields in its oxidation the isomeric ketol (IX) of compound (VI). Thus keto alcohol (VI) is a cis-decalin derivative, so that also acetylene alcohol (IV) and its derivatives belong to this series. Keto alcohol (IX) and diol (X) are thus derivatives of transdecalin. Several substituted cis- and trans-α-decalols were obtained. The absorption spectra of several tertiary α-decalols are shown. It may be seen from

Stereochemistry of the Synthesis of Acetylene With Bicyclic Ketones. Synthesis of Cis-1-ethynyl-1-oxy-6-decalone. Absorption Spectra of the Series of Tert.α-decalols

them that cis-ethynyl-α-decalols synthesized in the same way possess the same chemical properties and the same absorption spectra. There are 3 figures and 12 references, 6 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii Akademii nauk SSSR (Institute of Organic Chemistry of the Academy of Sciences, USSR)

SUBMITTED: January 4, 1958

SHOSTAKOVSKIY, M.F.; KUZNETSOV, N.V.; DUBOVIK, N.A.; ZIKHERMAN, K.Kh.

Synthesis of ethoxyacetalaldehyde and its chemical transformations.
Izv. AN SSSR. Otd.khim.nauk no.8:1495-1500 Ag '61.
(MIRA 14:8)

1. Irkutskiy institut organicheskoy khimii Sibirskogo otdeleniya AN SSSR.

(Acetaldehyde)

27495
S/062/61/000/009/011/014
B117/B101

5.3400

AUTHORS: Shostakovskiy, M. F., Kuznetsov, N. V., and Yang Che-Min

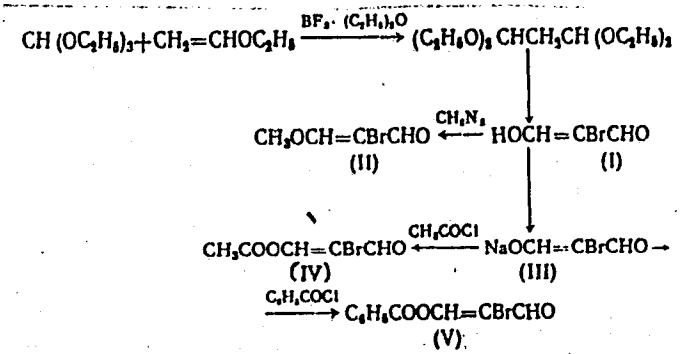
TITLE: Synthesis and transformations of new vinyl ether derivatives

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 9, 1961, 1685-1688

TEXT: The present work was undertaken as a part of the studies of synthetic methods for the preparation of new vinyl ether derivatives. In the course of it, several new 3-hydroxy-acrolein ethers and esters were prepared by the following reactions.

Card 1/5

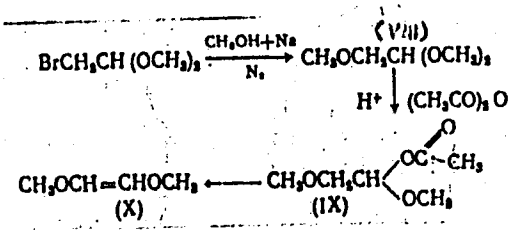
Synthesis and transformations ...



The authors investigated whether these 3-hydroxy acrolein ethers and esters give the diene condensation. The ether (II) and esters (IV) and (V) obtained readily hydrolyze under the influence of water and atmospheric moisture. They consolidate on storage. Diene condensations of (II), (IV), and (V) with vinyl-butyl ether could not be realized, since the reaction products resinified completely, probably as a result of hydrogen bromide formation. Ethyl orthoformiate, however, reacts readily with dioxene in

Synthesis and transformations ...

the presence of boron trifluoride etherate, yielding 2-ethoxy-3-diethoxy-methyl -p-dioxane (VI) ($C_{11}H_{22}O_5$, b.p. 135°-137°C (20 mm Hg), n_D^{20} 1.4337). This may be hydrolyzed to 2-formyl p-dioxene (VII) ($C_5H_6O_3$, m.p. 40°-42°C), which is also a derivative of acrolein. This unsaturated aldehyde is highly hygroscopic and crystallizes in the form of its hydrate. Its cyclic structure is confirmed by the absence of a reaction with ferric chloride, as well as by analytical and spectroscopic data. The authors also studied synthetic methods for the preparation of 1,2-dimethoxy ethylene (X) which was obtained by the reactions:



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Starting from the acetal of bromo acetaldehyde the authors prepared 1,1,2-trimethoxy ethane (VIII) (b.p. 125°-126°C (741 mm Hg), n_D^{25} 1.3930) which on boiling with acetic anhydride in the presence of a trace of p-toluenesulfonic acid is transformed to the acylal (IX) (b.p. 64°-65°C (14 mm Hg), n_D^{20} 1.4055). On treating (VIII) with acetic anhydride and a drop of concentrated sulfuric acid, letting the mixture stand for 14 hr, and then treating it with ice water, with subsequent extraction and distillation, 1,2-dimethoxy-1-acetoxy ethane (IX) was obtained also. The reaction mixture obtained by boiling (IX) for 2 hr at 162°-165°C was slowly distilled from a Favorskiy flask. A mixture boiling at 71°-145°C was obtained. The reaction product was washed with concentrated sodium carbonate solution, dried over potassium carbonate and fractionally distilled, yielding a mixture of isomers in the ratio 3.5 : 1 (1,2-dimethoxy ethylene (X), b.p. 97°-99°C, n_D^{20} 1.4184 and an isomer b.p. 103°C, $n_D^{20.5}$ 1.4204). The yield of 1,2-dimethoxy ethylene did not exceed 20%. The study of these isomers is being continued. There are 14 references: 3 Soviet and 11 non-Soviet. The four most recent references to English-

Synthesis and transformations ...

language publications read as follows: M. F. Ansell, B. Gadsby, J. Chem. Soc. 1958, 3388; K. C. Brannock, J. Organ. Chem. 25, 258 (1960); S. M. McElvain, S. H. Stammer, J. Amer. Chem. Soc., 73, 915 (1951); W. F. Sresham, US. Patent 2526743.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences USSR)

SUBMITTED: March 10, 1961

X

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SHOSTAKOVSKIY, M.F.; KUZNETSOV, N.V.; YAN CHZHE-MIN' [Yang Chê-min]

Synthesis of ethers and esters of 1,2-dioxyethylene and their transformations. Izv.AN SSSR-Otd.khim.nauk no.4:710-716 Ap '62. (MIRA 15:4)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Ethers) (Esters) (Ethylene)

S/020/62/146/006/002/016
B172/B186

AUTHOR: Kuznetsov, N. V.

TITLE: A generalization of a theorem by V. A. Ambartsumyan

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 146, no. 6, 1962, 1259-1262.

TEXT: The following theorem is considered: If the spectrum of the boundary value problem

$$\varphi''(x) + (\lambda - q(x))\varphi(x) = 0,\ 0 \leq x \leq \pi,\ \varphi'(0) = \varphi'(\pi) = 0$$

agrees with the spectrum of the unperturbed problem

$$\varphi''(x) + \lambda\varphi(x) = 0,\ \varphi'(0) = \varphi'(\pi) = 0$$

then $q(x) \equiv 0$. The author generalizes this statement to the two- and three-dimensional cases, considering the boundary value problems

$$\Delta\varphi + (\lambda - V(x))\varphi = 0,\ \left.\frac{\partial\varphi}{\partial n}\right|_{\Gamma} = 0 \qquad (3)$$

and

$$\Delta\varphi + \lambda\varphi = 0,\ \left.\frac{\partial\varphi}{\partial n}\right|_{\Gamma} = 0 \qquad (3')$$

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